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Curriculum in post-secondary education remains grounded in practices and assumptions about learning that is more representative of a 19th model of education than a 21st century model of education. Compounding this paradox is that fact that because of technological advance the entire world is experiencing a paradigmatic shift in the way knowledge is produced, disseminated, and learned. This essay suggests a curriculum theory of information literacy that is informed by socio-cultural literacy principles and a DIY hacker ethos, with the assumption that such a curricular epistemology could prove revolutionary across disciplines. The essay concludes with observations about the radical changes in knowledge production and human information interaction.

Headings:

Information Literacy

Curriculum Theory

New London Group

Hacker Theory

HACKING CURRICULUM: LEVERAGING WEB 2.0, SOCIO-CULTURAL
LITERACY, AND COMMUNITY TO ARTICULATE INFORMATION LITERACY

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"To stay relevant in the 21st century, education institutions need to keep pace with the rapid changes introduced by digital media. Youths' participation in this networked world suggests new ways of thinking about the role of education."

- Digital Youth Project (2008)

"There remains a third revolution, perhaps the most difficult of all to interpret. We speak of a cultural revolution, and we must certainly see the aspiration to extend the active process of learning, with the skills of literacy and other advanced communication, to all people rather than to limited groups, as comparable to the growth of democracy and the rise of scientific industry."

-Raymond Williams in The Long Revolution

INTRODUCTION

My research begins with the supposition that most of curriculum and education operates from a nineteenth century model of education. And, my thesis presupposes that as a result of our current socio-technical moment the entire world is experiencing a revolutionarily paradigmatic shift in the way knowledge is disseminated and learned. This conjuncture provides an opportunity for critical educators to enact a more liberatory pedagogy. Hence, I focus on the disciplinary space of Information and Library Science, and how an appropriately revolutionary curriculum theory of information literacy might attend to the needs and opportunities of this socio-technical sea change.

Paulo Freire (2000) remarks that all too often the educational experience, especially for the historically disenfranchised, resembles a “‘banking’ concept of education, in which the scope of action allowed to the students extends only as far as receiving, filing, and storing the deposits” (72). Freire argues, in response, that “knowledge emerges only through invention and re-invention, through the restless,

impatient, continuing, and hopeful inquiry human beings pursue in the world, with the world, and with each other” (72). In response to Freire’s call for a pedagogy of liberation and in antagonism to this outmoded paradigm, I argue that critical educators should pursue identification and innovation, as well as curricular implementation of 21st century skills and literacies. This is a revolutionary call, given most librarians’ conditions of engagement. For many librarians and educators it is a formidable challenge to recast what information literacy means. For, as Christine Pawley states, “the ultimate ideal of information literacy is to promote citizen empowerment and democracy—a promethean paradigm that is hard to express in conventional techno-administrative discourse” (426). Critical librarians like Pawley suggest a new thinking through of what information literacy means and could mean. I pick up this same thread, though from the side of the user, to suggest that social meanings, uses, and practices of literacy (as well as creativity and collaboration) already exist in other spaces, namely the social sphere of library users. These spaces, practices, and meanings should be allowed, even encouraged, to leak into the traditional library space where outmoded definitions and practices of (information) literacy have reigned for too long.

I believe that my argument seems appropriate given the influence of the demographic of students born between 1980-1994, often referred to Generation Y or digital natives (Prensky, 2001); these students, already on college campuses or set to arrive in the coming years, represent a new breed of student entering and influencing the educational establishment. These digital natives exist as a generation that has grown up in front of electronic screens and have been socialized to learn through play and experimentation with digital representation and realities (Palfrey, 2008). And, quite

clearly, “today’s students are no longer the people our educational system was designed to teach” (Prensky, 2001, 1). The digital natives of Generation Y are different in their cognitive orientation and learning preference than their predecessors, often referred to as digital immigrants who grew up learning in living in a less connected and less media saturated context (Prensky, 2001). Quite often these digital immigrants are the ones teaching the digital natives. One sees the proverbial rub here. To respond in part, I propose a new epistemological frame for curriculum theory in the field of Information and Library Science, one that includes, and even moves beyond, mere technical and technological skills and into critical and creative collaboration (Rheingold, 2009). To achieve this, the concept of “critical information literacy” must be operationalized outside of information literacy’s current and historical context.

In my effort to suggest a curriculum theory of an alternate information literacy, this paper aims to address how the concept of information literacy might be reconstituted by incorporating tenets of socio-cultural literacy as discussed by The New London Group, and how this reframing might be informed by the DIY (do it yourself) mindset of the hacker class (Wark, 2006). The New London Group, a collaboration of literacy scholars, set out to redefine literacy as a socio-cultural practice versus a merely technical one (i.e., language acquisition). By advancing a pedagogy of multiliteracies The New London Group (1996) called attention to the growing variety of texts and design practices made possible in a world of increasing technological, cultural, and linguistic diversity. The New London Group proposed curriculum theory aimed at the empowerment and enfranchisement of holders of historically unsanctioned literacies. This New Literacy Studies movement that The New London Group initiated, will be used

in my theoretical framing to argue for an information literacy curriculum that situates acts of “reading” and “writing”, literacy rather, within contemporary social and cultural contexts, namely that of social media. This “social turn” makes interaction and social practice center to any theory of literacy and communication (Gee, 1999). I ultimately hope to suggest that only by situating literacy in “the social” this way can we forward an appropriately progressive and inclusive curriculum. My second theory, that I suggest should exist in a dialogic relationship with work of The New London Group, is that of the DIY mindset or hacker ethics (used synonymously in this paper). A hacker ethics is essential to recasting information literacy simply because we are endeavoring to hack the tradition of curriculum, meaning, and practice when it comes to information literacy. Just as a hacker ethic replaces Protestant work ethic notions of duty with a hacker ethos of playful, interested intellectual inquiry and creation (Himanen, 2001, 7-8), so should critical librarians and educators reroute current systems by privileging the contemporary socio-technical practices of knowledge production and communication. When I suggest a hacker ethos I am suggesting something very similar to what Guy Debord and The Situationiste Internationale described as *detournement* where “Ultimately, any sign is susceptible to conversion into something else, even its opposite” (Debord, 1956). When Wark (2006) wrote of a hacker ethos and manifesto he did so by directly emulating Guy Debord’s Society of the Spectacle, thereby continuing a revolutionary trajectory that has existed well before proliferation of the Internet and exists as a revolution concerned with broad societal change. This is the same concern that curriculum should possess. Historical curriculum, information literacy curriculum and otherwise, can be hijacked or detoured or rerouted to make something new, creative, and progressive.

Lankshear and Knobel synthesize the philosophy of The New London Group when they state that “literacy is not simply knowing how to read and write a particular script but applying this knowledge for specific contexts of use” (65). In New Literacies: Everyday Practices and Classroom Learning, Lankshear and Knobel (2006) argue that educators should avoid “focusing exclusively on the technology of a writing system and its reputed consequences”, and “approach literacy as a set of socially organized practices which make use of a symbol system and a technology for producing and disseminating it”. I assert that if information literacy curriculum were to be informed by such a socio-cultural mandate in lieu of a merely technical one, the possibility for a more liberatory pedagogy would exist. By invoking a DIY mindset in our techno-cultural present, information literacy as liberatory pedagogy gets framed as an essential skill in a new axis of class conflict in which there exists a new concept of labor known as “immaterial” labor. This new labor is flexible, mobile, often precarious and does not respect a division between work and leisure (Wark, 2006, 169), which effectively means that immaterial labor leaks into virtually any space of everyday life just as learning and play leak into formalized spaces of education. This new labor, new creativity rather, is irreverent toward historical institutional definitions and practices that insist on “knowing” and “being” certain ways in this world, just as the Protestant work ethic prescribed duty in servitude to a higher god as one toiled for an industrial boss and just as historical definitions of literacy insisted on narrowly defined technical skills of reading, communicating, and knowing. To wit, many conceptualizations of information literacy mirror the same strictures of historical literacy education and possess the same boring instructional delivery and limited usefulness in academic, professional, or social

situations once the formal instruction, or training, has been executed. It is worthwhile to note that these are the same qualities that made historical literacy initiatives disenfranchising and imperialistic in spirit (Stuckey, 1991). To resist this hegemony librarians and critical educators might look to the social sphere. Emergent social media that characterize Web 2.0 technologies can easily serve as sites of exploitation or revolution in the production/disruption of various hegemonies surrounding immaterial labor.

Historical, and most current, information literacy initiatives privilege (almost exclusively) technical mastery of information skill sets and call this literacy. Epitomizing this approach is Eisenberg's "Big6" approach to teaching information literacy; arguably the Big6 is the most well-known and probably most widely taught approach to information literacy (Eisenberg, 1990). The steps and tenets of the Big6 focus on: task definition, information seeking strategies, location and access, use of information, synthesis, and evaluation. While the Big6 and its contemporaries do teach valuable skills, these information literacy programs do not question the hegemony or context of curriculum. Their aim is not to reconfigure the relations of power or the ways in which power gets articulated. In fact, recent research (Luo, 2009) highlights that the majority of academic librarians use Web 2.0 tools in just this spirit of technical mastery and not paradigm contestation and reconfiguration. Findings show that during library information literacy instruction sessions librarians most often (84 percent of the time) use Web 2.0 tools to facilitate the delivery of content to students, meaning that the Web 2.0 tools are either used to publish the content for students to access and interact with, or involve students in using the tools to complete coursework collaboratively or enhance

interaction. Luo contrasts her findings with the fact that much fewer librarians conduct information literacy instruction sessions that draw upon certain features of the Web 2.0 technology to better illustrate information literacy concepts (37). In sum, the hegemony is not being questioned.

Suturing these two theories of social practice to liberate information literacy means that librarians set out to “hack” the system, whereby librarians as hackers would “create the possibility of new things entering the world” (Wark, 2004, 21) with the notion that a new thing/context could create new possibilities for relations of power and opportunity. Critical information literacy should exist as a technological and experiential practice, one that is able to inform or replace current information literacy initiatives. Recasting the curriculum theory of information literacy vis-à-vis the spirit of “the hack” could bring new meaning and possibility to “critical” information literacy. Levy (1994, 23) remarks that “to qualify as a hack, the feat must be imbued with innovation, style and technical virtuosity”. This paper posits a curriculum theory to enable such a conceptualization and then briefly examines the characteristics and sites of spaces where practices of critical information literacy have been (or could be) enacted.

While the path of critical literacy scholarship has been travelled heavily for several decades, a few essential points seem to be more appropriate than ever before given our techno-cultural conjuncture and current debates about kids and education. Lankshear and McLaren's (1993) invocation of Hall's “new times” concept as a way to understand the transitional nature of a technologically advanced Post-Fordist society and the new literacies that get produced is particularly apt. Put simply, because these are “new times” we need new curriculum and new pedagogies to address 21st century social

and cognitive contexts. In an attendant rearticulation of information literacy I pick up that same tradition of criticality in “new times”, with particular stress on Hall's (1989) point that information technology has made us more connected (and more fragmented) than ever before and, as a result, the proliferation of literacies and positionalities has accelerated to an unprecedented degree. This “proliferation” is really a “recognition” of the diversity of individual and groups with which we interact on a daily basis, due to our increased technological and economic connectedness and interdependency. Recognizing this diversity, or at least difference, requires that there is a tacit recognition of the variety of ways of knowing that exist, of the variety of (socio-cultural) literacies that are highlighted and no longer invisible due to our accelerating (inter)connectedness. Just as historical literacy theory neglected to acknowledge the validity of various literacies, so too does historical information literacy neglect to acknowledge how technology has dismantled conceptualization of intellectual authority and leveraged our social interconnectedness when it comes to communication and knowledge production. As Hall (1989) argues, to understand this condition there must exist a “return of the subjective”. A return to the “subjective” will enable a privileging of characteristics of the very technologies that have seemingly fragmented us. I refer specifically to Web 2.0 technologies, such as Wikipedia, Facebook, Ning, Twitter, and Flickr, whose dominant characteristic are that they exist contingent upon collaboration, continuous communication, and a tacit encouragement of increasing participation by anyone who collaborates and contributes (both in breadth and depth) to the advancement of this networked context. I will return to these notions of subjectivity later in of this paper vis-à-vis symbolic interactionism. It is important to note here that the spaces that are profiled

later in this paper as sites of possibility are often spaces inhabited by individuals and groups who have probably felt occlusion and objectification on a variety of levels, more so than most adolescents in traditional education settings. A new curriculum theory that supports critical information literacy would empower these, and all, students in ways currently unrecognized.

HISTORICAL FORMATIONS OF LITERACY

Multiliteracy, Digital Literacy, and Socio-Cultural Literacy (esp. The New London Group)

Due to changes in the world, especially globalization and an increase in immigration, a debate has arisen about the way students are instructed, and the ways in which students are *formally* learning, in school. On one hand the lack of collaboration within these new spaces of diversity and pluralism is rightly maligned, and at the same instance the critique of a curriculum that noticeably occludes emphasis on technological literacy and creativity is rightly levied. For instance, Education programs and English departments (the historical homes of literacy studies), and all subjects, should evolve to incorporate the multimodal ways of communication, (meaning old, new, and emerging media) that students are so familiar with in their social and everyday spaces outside of school. Summarily, this false partition between academic activity and social practice that traditional curriculum and instruction seems to insist upon needs to be dismantled. The New London Group (Cope & Kalantzis, 2000, 32) proposes the teaching of all representations of meaning including, linguistic, visual, audio, spatial, gestural, and multimodal through a balanced classroom design of situated practice, overt instruction,

critical framing and transformed practice. The research from information literacy scholars and librarians is complementary to the assertions of The New London Group. For instance, Weiler (2004) synthesizes information literacy research that “indicates that only a very small percentage of the general population prefer to learn by reading” (46). So, in a practice that is governed by a DIY ethos students draw on their own experiences and semiotic literacy practices to represent and communicate meaning; this is in line with critical educators, many of whom are devotees of Freire, who strive to proverbially “meet students where they are at”. In referring to *meaning*, in an educational context I refer to the ways in which students name and describe terms, concepts, and practices; the social ways that students create new language, practices, and mores within society is directly related to literacy inquiry which tries to get at how individuals makes meaning, share experiences, and construct literal and philosophical grammars of communication. Students transport these practices and preferences into the classroom, though they either remain hidden or unrecognized due to curricular oversight and exclusion, thus underscoring that these social and academic spheres are not separate spaces. It is only that retrograde curriculum strictures students’ meaning making practices from the social sphere so as to maintain (a false sense of) control of curricular space. New London Group contributors Gee, Hull, and Lankshear (1996) capture a key component of how I believe literacy should be recast when they write, “On the traditional view, literacy is seen as a largely psychological ability—something true about our heads. We on the other hand, see literacy as a matter of social practices—something to do with social, institutional, and cultural relationships” (1). Though not a central theory of curriculum or most curriculum or pedagogy, this is not an alien conceptualization. In fact, many in the

social sciences and humanities will recognize this as a key characteristic of the socio-epistemic turn in social or communication theory. To extend and conclude this quote, a more relevant curriculum theory for information literacy and learning would center social practices and how social practices govern what gets produced, construed, and contested as knowledge. Making the move that The New London Group argues for is anti-establishment...it is something a hacker would do.

In this tradition, a dialectic between literacy and culture exists. More to the point, there are socio-technical ecologies of literacy, ones that have unfortunately gone unrecognized by curriculum theorists. Hawisher and Selfe (2004) illuminate the nature of these socio-technical ecologies when they stress that literacy is intertwined, nearly dialectically, with culture, and that literacy in our current information age cannot be separated from the production of cultural space and identity. Hawisher and Selfe make several claims with regard to literacy and cultural ecology that are essential to my argument that we are educating in “new times” due to a technological and socio-cultural paradigm shift. I quote Hawisher and Selfe at length below, in an effort to underscore that not only has the educative context under which we toil changed but the relationship among literacy influences in literacy and what “counts” as literacy has changed without appropriate recognition from those theorizing and thinking through curriculum. So, at length but with import, Hawisher and Selfe state:

- 1) Literacies have life spans. These lifespans differ within particular “patches” of a cultural ecology.
- 2) People can exert their own powerful agency in, around, and through digital literacies. In particular cultural ecologies, some individuals may even confound society's expectations regarding race, class, age, and gender.
- 3) Schools are not the sole- and, often, not even the primary-gateways through which people gain access to and practice digital literacies.
- 4) The specific conditions of access have a substantial effect on people's acquisition and development of digital literacy. Thus, access to computers-and to the literacies of technology--cannot be

accurately represented as an isolated or monodimensional formation. Rather, access is best understood as part of a larger cultural ecology. Physical access to computers is necessary but insufficient for the acquisition and development of digital literacies. 5) Families transmit literacy values and practices in multiple directions. Information about, and support of, literacy can flow both upstream In foregrounding the significance of multiple contexts for electronic literacy efforts, we hint at the many related factors that shape, and are shaped by, people's adoption of computers as literacy tools and environments. (from younger people to older people), and downstream (from older people to younger people), and across media (print to electronic environments or from electronic to print environments) (644-655).

By hacking the traditional notion of literacy, and thereby broadening what it means to “read”, socio-cultural literacy theorists “arrive at social practices integrating talk, action, interaction, beliefs, and values...*specific and diverse ways of being in the world.*” (Gee 3). Our being in the world has changed because of our technological present (e.g., mobile web, ubiquitous computing, user driven construction of cyber-discourse and meaning). In these “new times” if the notion of critical literacy is to have any sort of critical animation, there must exist a foregrounded concern for the social, which means a concern for the uses and practices of literacy by diverse individuals and groups as they participate and change our socio-technical and learning landscapes. This critical animation of critical literacy is a qualitative and sociological endeavor, one that privileges social interaction, just as Web 2.0 does so. The tools of Web 2.0 seem a prime interstice for the hacking of curriculum because these tools are influential in our cultural moment and because quite often the masters of Web 2.0 tools are the students whose (socio-cultural) literacies I suggest curriculum theorists privilege going forward. A lot of previous theoretical work from the social sciences is finding new resonance because of Web 2.0. These theoretical traditions can provide a basis for claims or inspiration when defending or creating new curriculum theories of information literacy. I mention this in an effort to suggest a path

for linking theory with practice, for as most educators know this is an ever-present challenge. For instance, someone looking for method and theory to inform new curriculum might pursue symbolic interactionism. Through social and symbolic interaction, there exists a process that forms human conduct and a process where “learning” occurs (Blumer, 1969; Couch 1996). The knowledges and social formations that are products of this “learning” are of interest to those aiming to hack the historical curriculum of information literacy. More on symbolic interactionism is discussed in the following sections.

Information Literacy Applications and Methodologies in Higher Ed

By focusing on the socio-technical context within which we go about our daily lives, education can operationalize the “political” aspect of information literacy and use the concept of information (and our relation to it) to explicate information literacy (and even literacy in itself) curriculum. In a way, this is similar to the movement in the humanities to explode the notion of texts in which texts can include videos or street scenes to be “read”, just as easily as text could be logocentrically-bound content in a physical (or electronic) book..

As a “way in” critical educators can start with information literacy standards that are already in place. In most K-12 and community college settings there are already standards, outcomes, and/or objectives that are associated with teaching and measuring information literacy. Recasting and updating such standards is probably the path of least resistance for those aiming to develop a new curriculum theory of information literacy; this is also the least radical or revolutionary. The standards already in place at most institutions are typically executed through library outreach initiatives or through typical

library instruction sessions and workshops. In a few cases some institutions have information literacy across the curriculum mandates, which require each course to embed information literacy tenets into curriculum and instruction. With my proposed rearticulation I advocate more of an information literacy initiative across the curriculum. A starting point could be The Association of College and Research Libraries (ACRL) Information Literacy Competency Standards for Higher Education, which would seem to typify the most common outcomes and characteristics of information literacy standard. The ACRL's standards are generic and accepted standards already positioned within curriculum. However, they must be reconceptualized to rearticulate curriculum and thereby literacy. Information literacy forms the basis for lifelong learning. It is relevant across disciplines, environments, and all levels of education. ACRL standards are (located at:

<http://www.ala.org/ala/mgrps/divs/acrl/standards/informationliteracycompetency.cfm>) sit

currently as an innocuous curricular touchstone so there would likely be no real resistance to a librarian teaching these institutionally-endorsed principle, as least initially. And, not to give the ACRL standard short shrift because, vague as they are, the standards do operate around the central notion that information literacy enables learners to master content and extend their investigations, become more self-directed, and assume greater control over their own learning. According to the ACRL, an information literate individual is able to:

- 1) Determine the extent of information needed
- 2) Access the needed information effectively and efficiently
- 3) Evaluate information and its sources critically
- 4) Incorporate selected information into one's knowledge base
- 5) Use information effectively to accomplish a specific purpose

6) Understand the economic, legal, and social issues surrounding the use of information, and access and use information ethically and legally

My aim in this paper is to rearticulate, both theoretically and practically, how information literacy is taught and what its outcomes are. Initially, that spirit seems to have been the driving force behind the ACRL standards and, quite possibly, the reason the standard were written in such a vague fashion so as to leave them “open” for further development, improvement, or hacking. In “Critical Information Literacy: Implications for Instructional Practice”, Elmborg (2006) asks, “Should librarians be content to teachthe grammar of information,” or “should they emphasize its role in creating privileged discourse?” (197). I believe that educators can actually do both, though such a project is more of a curricular one than a simple goal for traditional library instruction session. A critical information literacy initiative would work across Disciplinary boundaries and would require a curriculum design that would be student-centered and driven by current social practices and meanings. In What is Curriculum Theory Pinar (2004) asserts that the very meaning of curriculum theory is “the interdisciplinary study of educational experience” (2). Hashing out a curriculum theory of information literacy would require librarians to creatively apply an interdisciplinary forte.

Learning that occurs via integration of social meaning and experiential practice characterizes much of the sociological theory of communication known as symbolic interactionism. As new curriculum theories of information literacy are developed and as these theories are applied, be it in a learning commons or as an embedded component of a course, theories of “the social” will prove useful. One example of a theory of “the social”, or a theory representative of “the social turn” as The New London Group would

argue (Gee, 1999) is symbolic interactionism. Blumer (1969, 2) states the three premises of symbolic interactionism as:

- 1) Human beings act toward things on the basis of the meanings that the things have for them,
- 2) The meaning of such things is derived from, or arises out of, the social interaction that one has with one's fellows, and
- 3) These meanings are handled in, and modified through, an interpretative process used by the person in dealing with the things s/he encounters.

Good theory can be applied across contexts, and can be used to understand the production of contexts. If one takes tenets of symbolic interactionism and uses these tenets as a lens with which to view our current socio-technical moment, then it becomes apparent what influential forces are valued in relations of communication, learning, and collaboration. For instance, the collaborative nature of learning and the contestation of intellectual authority becomes apparent when one uses symbolic interactionism to analyze interactions of high school or university students, not just the conclusion that students like to play online video games, spend hours on Facebook, employ various Web 2.0 technologies or that adolescents tend to cite Wikipedia. For any curriculum to have resonance, there must be a theory behind its construction otherwise one risks perilous compressions and half-baked notions of what might work when designing instruction and meeting learning objectives.

In addition to ACRL standards and initiatives already in place, there are a few private sector projects that highlight the importance of this focus. The most prominent is Microsoft's Partners in Learning program (<http://www.microsoft.com/education/PIL/partnersInLearning.aspx>). The Microsoft Partners in Learning Program is "a global initiative designed to actively increase access

to technology and improve its use in learning” with a stated goal of helping “schools gain better access to technology, foster innovative approaches to pedagogy and teacher professional development”. Microsoft’s global research program intends to “broadly investigate” the effects that information and communications technology has in transforming teaching and learning at the school and education system level. This is exactly what a critical curriculum theorist should do as well. However, Microsoft has different and more resources than most educators and librarians; Microsoft says it will invest \$1 million annually in the multi-year study (which also includes a multinational component in partnership with the governments of Finland, Indonesia, Russia and Senegal).

Microsoft is researching, reflecting, designing, implementing, and assessing curriculum. The primary focus of Microsoft’s partnership’s research, which is being guided by outside advisors from the OECD, UNESCO, the World Bank, the International Society for Technology in Education and other organizations, is to assess teachers’ adoption of innovative classroom teaching practices and the degree to which those practices provide students with personalized learning experiences. This sounds exactly like something that should be done by every educator, however this initiative is being carried out by one of the premier technology companies on the planet whose goals and intentions may not directly mirror those of a progressive educator. Regardless, just as one cannot deny the hegemonic influence of Google on the influence on the practices of libraries and preferences about access and discoverability of information, it would be foolish to believe that education and curriculum could exist insulated from the influence of corporate influence. A tactical reckoning is unavoidable.

Microsoft's program is constructed so as to complement their Assessment and Teaching of 21st Century Skills (ACT21S) research which focuses primarily on identifying what it refers to as "21st century skills", and developing ways to measure them by providing new methods of assessing students. The ACT21S research was developed through a collaboration between Cisco, Intel and Microsoft.

It is undeniable that collaborations and initiatives like this are impressive, influential, and valuable in achieving many educative outcomes. The research is likely to be well executed and a valuable resource, especially to curriculum planners and educators who do not have resources to conduct such inquiries. Microsoft plans to make methodologies, data and reports open to researchers around the world, and the information will be free and publicly available each year. In addition, the research project will develop a set of evaluation tools that schools and education systems can adopt to measure their own progress. It is obvious that initiatives such as the Microsoft Partners in Learning Program could map nicely onto information literacy programs or be used to inform information literacy programs, though I would strongly underscore the need to remain critical of private sectors interests and agendas as they might run counter to progressive educational mandates. Hacking the information literacy curriculum would mean constructing a curricular pastiche by appropriating aspects of ACRL and private initiatives, like Microsoft's Partners in Learning.

For instance, librarians as curricular hacks would detour, they'd reroute, these skills and practices to serve their own needs as they might define them, as opposed to merely accepting a definition of necessity that other interests provide for them. To fully

capture the irreverence of the detournement I argue that Wark (2004) rightly characterizes the institutional irreverence of the hack when he writes:

When capital requires “hands” to do its dirty work, education merely trains useful hands to tend machines, and docile bodies meant to accept as natural the social order in which they find themselves. When capital requires brains, both to run its increasingly complex operations and to apply themselves to the work of consuming its products, more time spent in the prison house of education is required for admission to the ranks of the paid working class. When capital discovers that many tasks can be performed by casual employees with little training, education splits into a minimal system meant to teach servility to the poorest workers and a competitive system offering the brighter workers a way up the slippery slope to security and consumption. When the ruling class preaches the necessity of an education it invariably means an education in necessity (par. 50). Curriculum, hence information literacy conceptualization and instruction, is always already political in the sense that it teaches certain skills and not others and then directs subjects (i.e., students) on the proper behavior and use associated with such skills. To hack the information literacy curriculum means to accentuate technical skills, be they considered academic or otherwise, and to encourage creative use of said technical skills in non-academic or even historically educationally inappropriate ways. This would be the part that Microsoft might not have counted on.

PUTTING THEORIES OF INFORMATION LITERACY TO PRACTICE

How does one bring any theory, but especially a critical one, into practice? For the curriculum theory that this paper describes, the reflective practices germane to participatory action research (PAR) and critical ethnography are most appropriate. These

are also the tools and methods that are most realistic for a librarian-as-critical-educator to be able to employ. The data and observations provided from larger initiatives like Microsoft's can (and will) certainly prove useful, but if one wants to meet students where they are at and get a rich texture of the social life of adolescents then ethnography and general participation with students seems essential. Through this inquiry and collaboration with students, librarians can then get an idea of where youth are coming from and how the current curricular systems just don't serve them so that a reconceptualization of curriculum could occur.

Participatory action research (PAR) has emerged in recent years as a significant methodology for intervention, development, and change within communities and groups. It is now promoted and implemented by many international development agencies and university programs, as well as countless local community organizations around the world. PAR builds on the critical pedagogy put forward by Freire (2000) as a response to the traditional formal models of education where the teacher stands at the front and imparts information to the students that are passive recipients (72-72). This was further developed in "adult education" models throughout Latin America.

One of the preeminent researchers of youth participation with(in) social media is danah boyd (2008). Her doctoral dissertation, *Taken Out of Context: American Teen Sociality in Networked Publics* (in press), is possibly the most current and exhaustive ethnographic study of how adolescents participate, learn, and reflect on their actions in online environments as well as how youth leverage social media to make their own "space". The spatial practice of youth that boyd illuminates could easily serve as the new socio-spatial model of 21st century education. The space is collaborative, playful,

contradictory, and forces evolution of communication, knowledge, and relationships. For instance, boyd details the construction and collaboration that adolescents produce en route to communication in online environments or through online social networks like MySpace and Facebook. boyd also details collaborative naming activities such as tagging and how consensus and contestation drive youth language and meaning-making. boyd's piece is exemplary in its methodological modeling: boyd was an active participant, virtually and physically, with the youth in her study.

Rather than seek out and insist upon typologies or definitions of "social" and "new" media, critical educators should think through characteristics of any media that resonate with learners. It just so happens that:

contemporary social media are becoming one of the primary "institutions" of peer culture for U.S. teens, occupying the role that was previously dominated by the informal hanging out spaces of the school, mall, home, or street. Further, much of this engagement is centered on access to social and commercial entertainment content that is generally frowned upon in formal educational settings. (Ito, 39)

Typically, the most popular social media is the "newer" media. It is also the most likely media to be noticeably absent or restricted in spaces of formal learning and instruction. Critical educators know that such strictures do not work and that a curriculum theory that embraces the social tends to be a curriculum theory that redefines the spaces of learning.

Ito's (2009) edited collection, *Hanging Out, Messing Around, Geeking Out: Living and Learning with New Media* continues to discuss approaches to observing and interviewing digital natives who continue to articulate uses and popularity for "new" media. I would argue that all libraries need to be talking to their patrons to see how all of

their services are meeting (or not meeting) patrons needs and desires. Foster and Gibbons (2007) illuminate the crucial need for libraries to continuously value qualitative inquiry in discovering and understanding what services, resources, and facilities would be most useful to (undergraduate) students. Foster and Gibbons also detail how technology has reshaped the work processes of students and indistinguishably blurred the boundaries between “the social” and “the academic”. All of the aforementioned sources stress the importance of understanding new conceptualizations of old terms that have historically had nothing to do with curriculum, like friendship and love, are recast by way of communication and preference for new media.

Curriculum renewal requires such a theoretical frame, informed by ethnographic study of what students are doing. At the center of these accountings is the fact that as youth create new meanings they are learning and challenging old (hegemonic) ways of knowing and being in the world. This, again, seems in line with the curricular and methodological tack of the innovative information literacy project. This is also the spirit of the hack and the mindset of a DIY pedagogy, a pedagogy that makes do with the resources it has in ways that are rarely institutionally or ideologically sanctioned.

Markham and Baym (2009), in *Internet Inquiry : Conversations About Method*, define qualitative internet research as “the study of multiple meanings and experiences that emerge around the Internet in a particular context”. If one is situated in an institutional context and desires to be an active critical cultural worker, Markham and Baym can provide a legitimation for privileging the influence of social media research and the information seeking behavior of millennials in curriculum redesign. I mention these texts for two primary reasons: 1) that curriculum (re)designers have touchstones to

inform and validate their efforts when questioned or antagonized by authority and 2) to stress that actions such as the construction of curriculum must be informed by sound methodological and theoretical “thinking through”. That said, as with any revolutionary act, the major challenge is often found in locating the proverbial way in or finding a path to get there from here. I read Markham and Baym to validate my aforementioned mandate when they remark that “these meanings and experiences can relate to contexts of use (by individuals, organizations, networks, etc.) and/or to contexts of design and production processes” and that the “task of a researcher involved in a qualitative internet research project is to inquire into those meanings and experiences and explore their significance” (34). This charge extends to include curriculum designers as well as researchers, which easily includes faculty in Information and Library Science departments who research and teach foundational courses and concepts of librarianship. Curriculum in these professional training programs is not insulated from the irreverence of the curriculum theorist concerned with hacking his/her way to more relevant, creative, and interesting curricular spaces.

SPACES OF THE HACK: BOTANY THROUGH WEB 2.0 AND THE LEARNING COMMONS

In an effort to show examples of how new curriculum theories of information literacy might become manifest, this section profiles two examples of what I have endearingly referred to as “spaces of the hack”. I recently served as a member of a research team funded by a National Science Foundation grant to research digital literacies and identity as they relate to learning through the use of Web 2.0 technologies. The project, Bot 2.0 (Botany through Web 2.0, the Memex and Social Learning), examined

innovative curriculum designed to recruit, educate, and retain nontraditional students in the study of botanical science. I share some observations from this project in an effort to stress that for any information literacy initiative to be effective the initiative must be articulated across the curriculum and must ideally be multidisciplinary in nature.

Realistically, this is what curriculum should be anyway. It should be messy and celebrate the premise that spaces of all types leak into each other and that any partition that gets constructed is done so out of delusion and a false sense of control. As readers peruse this last section I ask that they keep in the back of their minds how each one of these examples privileges previously marginalized practices of meaning-making, places of curriculum, and interaction with/organization of information. Now, on to the vignette; for readers interested in a more comprehensive description of the Bot 2.0 project, the project homepage is: <http://ils.unc.edu/mrc/bot-20/>.

My role as a Bot 2.0 team member was to examine how students from underrepresented groups use social media and electronic literacies to learn and make meaning in educational as well as social spaces. In a sense my Bot 2.0 research exists as a case study of critical information literacy to suggest curriculum and information literacy skills that would position social media as a way for, say female community college students, to access curricular spaces to which they have historically been underrepresented, namely Botany and the natural sciences. The Bot 2.0 project is an information literacy conceptualization that emanates from outside of the historical curriculum of Botany, as well as outside of historical practices of teaching and practicing information literacy.

Jenkins (2006) calls for policy and pedagogical interventions to teach new media skills in the 21st century and to develop socio-technical aptitudes. Jenkins states that the “Participation Gap” is one of the primary barriers to development of these skills and aptitudes (12-14). Curricular attention to gaps in participation is important and, unfortunately, rare. Nationally, men outnumber women in the Associates degree level study of botanical and agricultural sciences by a margin of 2:1 (National Science Foundation, 2008). However, women comprise 60 percent of community college students in the United States (AACC, 2010). The Bot 2.0 project endeavored to “meet students where they’re at” and to use technology in ways that enabled students to access discursive spaces from which they had been previously occluded. Web 2.0 technologies and their attendant methods for collaboration served as a “way in” to the discourse of science. For instance, and in juxtaposition to their representation in Botany, women make up nearly 57 percent of active Facebook users in the United States (Gonzalez). The discursive space of “science” curriculum appears less familiar and/or accessible to historically marginalized students than the collaborative and interactive affiliation spaces (Jenkins, 2006, 8) of new media that utilize new methods for naming and organizing complex systems of knowledge and relation. Consideration of this information also operationalizes, in a critical way, the fourth point of the ACLR standard for information literacy: An information literate individual can understand the economic, legal, and social issues surrounding the use of information, and access and use information ethically and legally.

Hopefully the reader has witnessed my concern with how Web 2.0 and the collaborative and communicative social spaces of "the virtual" may present opportunities

to contest dominant notions of scientific literacy and its practices, thereby rearticulating consensus over meanings and practices in an effort to create more just and “utopian” communities. The Bot 2.0 project aspired to achieve this detournement through a curriculum that compared and contrasted traditional taxonomy with user generated tagging activities that created botany related folksonomies. Folksonomic and collaborative practices (versus taxonomic and non-experiential practices) of social media present opportunities for students to access and (re)shape the discourse of undergraduate study in Botany. It often seems that one of the stated goals for most any information literacy initiative is (creative) collaborative problem-solving, which folksonomy certainly seems to facilitate. Folksonomy can generally be taken to mean an ordered set of categories (or “taxonomy”) that emerges from how people tag items; people tend to use tags that are meaningful to them and the most useful folksonomies are those where these tags become meaningful to many people (Weinberger, 2007, 165-166). The spirit of folksonomy is, in many ways, the spirit of the hacker...it is creative, innovative, and often irreverent toward established ways of knowing and organizing.

Blumer (1969) ushered in the theory of symbolic interactionism with the statement: “Human beings act toward things on the basis of the meanings that the things have for them” (2). As with Bot 2.0 curriculum theory for liberatory information literacy must build on socio-cultural and symbolic interactionist approaches to communication and meaning-making, and link the literacy skills of social media and experiential education to symbolic constructions of context and environment (e.g., so that entry into the discourse and curriculum of Botany seems less prohibitive). This is a curricular “meeting students where they’re at” mentality versus a historical “stricture, control,

police banking-model of education” mentality. As I stated earlier in this essay symbolic interactionism is a respected theory to support curriculum or learning theory, as well as a perfect lynchpin theory to served as grounded theory for qualitative inquiry such as ethnography. Symbolic interactionism also shifts the focus from historically authoritative logocentric textual readings to visual collaborative produced and synthesized digital and experiential contexts. There is an inherent possibility of, if not outright bias toward, rerouting of a commonly accepted sign when folksonomic communication is in play.

Prior to BotCamp activities, where students applied experiential learning and folksonomic study to Botany curriculum for a week while in-residence at UNC-Chapel Hill, small group discussion groups were held to meet and learn more about BotCamp participants. Any curriculum, regardless of what level or what subject, should endeavor toward such activites; however, few do. The University of Rochester is exemplary in this pursuit and can serve as a model not just for libraries. Well-known in the library world for their anthropological study of students in a holistic manner, researchers at The University of Rochester noted a “philosophy of ‘don’t guess, just ask’ has helped place {their} students in the center of the design process” (Gibbons, 2007, 98). This approach is apropos and successful, as Rochester has proven. However, it should not be limited to physical space construction. I could have easily invoked the Rochester tenets and approach in later in this section when I discuss the learning commons as a space for innovation, however I mention it now because curriculum space is equally as important as physical space and resources. And, the fervor and insights with which one hacks curriculum can make all the difference in historically marginalized individuals and groups. With the Bot 2.0 project we wanted to craft a flexible curriculum based on input

and representation provided directly from student participants. To start this process small group semi-structured interviews were held. The questions asked were:

- 1) What are some of the challenges you've encountered when studying science, especially Botany?
- 2) How would you define technology?
- 3) What have been useful technologies to you in your social life?
- 4) What have been useful technologies to you in your academic life?

By asking these questions and letting the students define terminology and contextual space from which curriculum developed, we were able to have a possibility of a more appropriate, reflective, and liberatory curriculum. We were also able to re-route, or hack, taken-for-granted meanings and beliefs about many terms and concepts that characterize information literacy and botany curricula. To ensure that curricular space resembles a space of process, conversation, reflexive revision, and access we engaged in informal discussions during BotCamp (as participant action researchers) and held larger focus groups at the camp's conclusion. In efforts to recap the BotCamp experiences and learn about the experience from participants perspectives the following questions were put to the group for discussion:

- 1) What are some of the challenges you've encountered when studying botany this summer?
- 2) What were some of the successes when studying botany this summer?
- 3) What have been useful technologies to you this summer in your social life?
Why/how?
- 4) What have been useful technologies to you this summer in your academic life?
Why/how?
- 5) How would you describe the relationship between academic and social technologies?

Consistently, individual and group responses indicated an affinity for experiential versus logocentrically bound Botany instruction. That is, the BotCampers preferred “hands-on” experience versus traditional classroom book-centric instruction. The material and the

language used to access and understand concepts seemed more familiar, empowering, and accessible to the BotCampers. A few characteristic quotations appear below. It is for this reason that I argued for symbolic interactionism as the dominant theory, for those who need a credible institutionally accepted access point, undergirding a new curriculum theory of information literacy. Through perusal of the following ethnographic nuggets, various audiences should be able to (re)cognize the important effect of experiential and collaborative curriculum (be it hands-on with botany or socio-technical “play” in a learning commons), notably a curriculum that is contestable and accessible via social media.

Student Experiences:

“I was surprised at how much difference it made to actually walk in the woods and see and touch the plants and trees.” AND “I really liked getting my hands dirty.”

And, with regard to the incorporation of social media technologies leveraged for sharing and collaboration, students remarked:

“I like being able to send pictures from my phone to Flickr.”

“Having a plant key and being able to see pictures on Flickr made identification so much easier. Seeing what others labeled plants that non-scientific names mattered too was really good for my confidence with Botany too.”

Bot 2.0 is an important example of how to revitalize traditional curriculum with the integration of social technology and social literacy, as well as how to be a curriculum designer who uses action research and ethnography. Bot 2.0 also supports my claim that information literacy holds untapped liberatory potential and that the integration of social perspectives and literacies is essential when integrating and leveraging emerging technologies into traditional curriculum. Also, student self-efficacy appears to be bolstered by integrating experiential learning vis-à-vis social media into Botany curriculum. It will be important to follow these students’ paths over the next few years to assess whether the Bot 2.0 experience did indeed translate into increased participation by

underrepresented groups in the field of Botany and to see if paradigmatic shifts in curricular collaboration and delivery did indeed occur. The very fact that we can have a conversation about revitalizing curriculum in this way does portend the possibilities, some undreamt, for educative and creative practice.

After reading this brief dissection of Bot 2.0, one might start to think about other fields, say math or information science, that might not appear to lend themselves to such innovation either because they are too linear, theoretical, or tend to be abstract in nature and orientation. This is a fair critique. However, I would urge two considerations when aiming to replicate the success of Bot 2.0 in fields that seem prohibitive to such curricular innovation. First, I would look to “the social” for suggestions on how to innovatively hack the curriculum of these fields. For instance, what sort of problems does the application of math solve? What do the physical or virtual spaces of libraries or information organizations look like? What has changed historically in these fields or spaces? My point is that change has occurred and that these fields have not existed in a vacuum; they have either influenced this change or they have been influenced by the change that has occurred. What problems were created and/or solved by this change and how has the field responded? How has the field continued to respond? One could start, rather should start, by asking students what they think about the responses that the discipline has offered up in times of change. One might look at historical technologies juxtaposed with current technologies to identify what constitutes literacy in a discipline today versus what was once considered technologically or information literate in said field. For the sake of example, it might prove useful for Information Science students to labor over a card catalog and then use software to design a taxonomy, or better yet a

folksonomy, of artifacts of various types. When engaging in these activities, individuals could look at how technological limitation or possibility may have determined the shape and context of a discipline or academic discourse community. From radically juxtaposing these technologies, how might one describe the history of a field and its attendant literacies? What possible futures might one predict, hope for, or demand?

These questions tie into my second suggestion for ways to hack curriculum in fields that appear resistant or challenging. Ask the philosophical question: What would you like this field to do and what technologies would you need to do this? Inevitably, some answers will require technologies or technological uses that have yet to manifest. When designing an appropriately radical information literacy curriculum, one component could focus on conceptualizing, even developing, technologies and technological uses that are concerned with characterizing future spaces. To a certain degree this asks for a reinvention of what certain fields focus on and how these fields go about their scholarly activities. To truly hack curriculum in such disciplines, one must possess a certain degree of irreverence and one must be willing to assert that the usefulness of certain disciplines (at least as they are currently constituted) has diminished. In general, there is philosophical utility to just about every discipline in the modern academy. However, the same challenge that exists for a designer of information literacy programs exists for scholars in said disciplines; that challenge revolves around how one links theory to practice in the discipline. If a field is maligned as being too theoretical or abstract, then its longevity and perceived value will soon be brought into question, so in a way information literacy can be a road to salvation in a sense. By identifying technologies and technological practices that enable a field to manifest its knowledge or scholarly

communication and collaboration (preferably multidisciplinary collaboration), information literacy curriculum makes disciplinary value and possibility apparent. In a way, the multidisciplinary conversation that currently surrounds the e-Science movement characterizes what I might consider a first step in gaining revolutionary entry into curricula that have historically been closed to technological flexibility and innovative collaboration.

The second interstice, in addition to Bot 2.0, that I believe offers the opportunity to produce revolutionary educative space is that of the learning commons. In recent years academic libraries have developed or renovated physical common areas in library buildings as well as created new spaces on various parts of campus to create collaborative technology-rich common areas. The development of learning or information commons in academic libraries is likely due “to the close synergy between the characteristics of information commons spaces and the way that Millennials conduct their academic and social lives” (Lippincott, 2010, 27). To wit, the learning commons space operationalizes socio-cultural literacies and practices by providing reinforcement for 21st century learning vis-à-vis abundant technology and digital content in a hyper-collaborative physical (and virtual) setting that is available 24x7. The general spirit of most learning commons is that of the public sphere or social marketplace of ideas. The historical mechanisms of control and curricular hierarchy are not characteristic of these new spaces, however historical tendencies die hard and librarians should be attentive to how they design and sustain learning commons so as to not (re)introduce historical models of learning and library interaction. Since this is a relatively new concept in libraries, one meant to be “different” than what the library has traditionally been to various publics, it is a perfect

place to recast information literacy and hack what it means to go and to be in the library and the information that is available (and even produced via collaboration) in the library.

The learning commons explodes the very notion of what is done in the library. By this I mean that historically the reading of physical logocentrically bound texts (i.e., books) were read, typically as a solitary act, in the physical space of the library. Now, the library is increasingly more mobile and digital than it is physical (ACRL, 2010, 288). The “texts” that are read are most certainly likely to be digital and representational in nature (e.g., data sets, graphs, dynamic web pages) and the way that these texts are read is often collaborative with multiple possibilities for reading and manipulation of the actual text being read. Librarians will have to make sure that they have the attendant skills to embed and blend into these new spaces of information. Not only is this a hack of the library space and practice, it is a hack of the librarian identity.

While the learning commons is one of the most fertile spaces for reinvention of information literacy practices, and library practices generally, I do assert that it is not completely an “anything goes” space. Just as there are some fundamental principles that buttress the spirit of the hack, there are some fundamental assumptions that I think should undergird the learning commons. Most importantly, the learning commons space should “interweave collaborative social resources with enhanced physical spaces, digital toolsets, and expert human support” (Beagle, 2006, 35). It should be about learning. Often these new areas are referred to as information or learning commons synonymously, however I insist upon a distinction that connotes active process which “learning” seems to achieve in a way that “information” does not. Words enable us to build out concepts and behavior, so that at a basic level choosing to think of a library as a space of learning

unlocks the library from its own history since learning is a social process and it is context specific. Social context has changed as has technological possibility. If anything, I hope that the theoretical tools of socio-cultural literacy theory and the creative hacker mentality can enable libraries to meet the learning challenges put upon us by the accelerated human-information interaction of the 21st century. With that in mind, I conclude with some basic thoughts on what this meditation on curriculum theory tells us about information.

ADIEU

Just as all educators should continue to reconceptualize the most effective ways to teach and respond to the world around us, critical educators should think through the very nature and redefinition of information. When Wark (2006) states that information wants to be free he is setting forth an observation on the new dynamic group-generated and group-engaged nature of information. It is improbable, if not impossible, that progressive educators will return to historical notions of control and authority. The production and reception of information reflects this. Any theory of curriculum and knowing of information (i.e., literacy) must be imbued with the a priori that information cannot help but want to be free, otherwise the theory of curriculum will prove untenable and irrelevant quickly.

The second point that is underscored by this essay is that current curriculum increasingly fights a losing battle to control information, meaning, and knowledge vis-à-vis terms like legitimacy, authority, and credibility. Actually, current curriculum does support, but not control, dominant ideology and meaning of the status quo. In a contradictory fashion, much of current curriculum relies on bureaucracy and hyper-

enthusiasm for capitalism. For instance, one could perceive the current ACRL standards for information literacy to support a standardized basic competencies curriculum, ala social efficiency model of education, that aims to educate workers for menial tasks in the workforce. Such basic skills curriculum is boring, bureaucratic, and extremely limiting in the possibilities it prepares students to pursue. The other pole of this tension, of this contradiction in curricular ideology, is represented by corporate initiatives such as those supported by Microsoft. These private sector initiatives are comprised of more jazzed up standards and may provide students with more current and financially-relevant skills; however, the ideology that is sold with the curriculum is narrow and myopic. For instance, the ideology inserted throughout Microsoft's Partners in Learning program intimates bright, exciting, cosmopolitan futures for individuals who successfully master the 21st century skills as Microsoft defines and teaches the skills' applications. The rhetoric of the program is that the skills are to be applied in certain prescribed ways if success (as defined by Microsoft) is obtained.

My meditation on curriculum theory highlights the possibility to talk about education currently and in the future in a way that articulates pedagogy and instruction differently. Here, I want to pause in order to connect back to points made in earlier sections. Namely that the new spaces of information literacy and of the library should make center the tactics of students as they navigate these new times, and as progressive educators we should work to articulate strategies of learning (that include cutting-edge technology to support communication, access, and collaboration) that are flexible and up for revision as well as appropriation in any time and fashion. The goal seems to be an open conversation where outcomes and possibilities are up for grabs within a context of

learning that is dynamic and contingent. Even though critical educators have not achieved Freire's mandate in Pedagogy of the Oppressed, it does seem that we are creating interstices for students (and teachers) that make the banking model of education less of a possible future.

The ultimate point that I hope to make is that categorically across contexts, social practices continue to win the struggle over what constitutes learning, meaning, and authority. And, institutions, namely schools and libraries, must radically realign how they conceptualize curriculum, literacy, and knowledge. Multidisciplinary curricula like that of Bot 2.0 and the recent proliferation of learning commons are great places to start. Both examples suggest the possibilities for other new spaces---collaborative, messy, unruly, and creative curricular spaces. In order to effectively and progressively hack curriculum, schools and libraries will have to do several things. Schools and libraries must 1) privilege the social-technical, meaning that educators/librarians will need to recognize knowledge production and learning will be characterized by contingency more than ever before; 2) recognize and engage the fact that authority is group-sourced though still subject to historical hegemonic agendas; 3) accommodate for the context where all communication and meaning is collaborative and that discourses (i.e., meanings, practice, behavior) change more rapidly than ever before. Grappling with curriculum theory is a challenging but necessary act, and doing so will enable the integration of information literacy-rich curriculum that is appropriate, engaging, and liberating for all who want to make the space of education their own.

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